

Applicant: Girton, Timothy S.
Application Serial No.: 09/704,494
Filing Date: November 2, 2000
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An endoprosthesis device comprising:

an elongate radially expandable tubular stent having an interior surface and an exterior surface extending along a longitudinal stent axis; and

a stent cover on said interior surface, exterior surface or both, said stent cover being formed of a porous-polytetrafluoroethylene having no node and fibril structure;

wherein said porous polytetrafluoroethylene is formed by the steps of:

providing an interpenetrating network of siloxane/polytetrafluoroethylene;

removing said siloxane from said interpenetrating network leaving a porous polytetrafluoroethylene structure without a node and fibril structure.

Claim 2 (original): The endoprosthesis device of Claim 1 wherein said stent cover is on said exterior surface and said interior surface of said stent.

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Claim 3 (original): The endoprosthesis device of Claim 1 wherein said stent cover is expandable upon expansion of said stent.

Claim 4 (original): The endoprosthesis device of Claim 1 wherein said siloxane is chemically extracted from said siloxane/polytetrafluoroethylene interpenetrating network.

Claim 5 (original): The endoprosthesis device of Claim 4 wherein said siloxane is chemically extracted by a compound selected from the group consisting of toluene, heptane and chloroform.

Claim 6 (original): The endoprosthesis device of Claim 1 wherein said siloxane is removed from said siloxane/polytetrafluoroethylene interpenetrating network by heating said network to a temperature of at least about 300°C.

Claim 7 (currently amended): A method of covering an endoprosthesis device comprising the steps of:

providing an elongate radially expandable tubular stent;

providing a porous-polytetrafluoroethylene having no node and fibril structure;

imparting porosity to said polytetrafluoroethylene by extracting siloxane from an interpenetrating network of siloxane and polytetrafluoroethylene;

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forming a stent cover from said porous polytetrafluoroethylene; and
applying said stent cover to an interior surface and exterior surface, or both of said stent
wherein said stent cover extends along a longitudinal stent axis.

Claim 8 (original): The method of Claim 7 wherein said stent cover is applied to said interior surface and to said exterior surface of said stent.

Claim 9 (original): The method of Claim 7 wherein said stent cover is fixed to said stent using an adhesive.

Claim 10 (currently amended): The method of Claim 9 wherein said adhesive is selected from the group consisting of polyurethanes, epoxies, cyanoacrylates, ~~polyamides~~ polyamides, polyimides, and silicones.

Claim 11 (original): The method of Claim 7 wherein said stent cover is fixed to said stent by a welding process, said welding process comprising heating the polytetrafluoroethylene stent cover to a temperature that is greater than the sintering temperature of the polytetrafluoroethylene.

Claim 12 (canceled)

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Claim 13 (currently amended): An endoprosthesis device comprising:

an elongate radially expandable tubular stent having an interior surface and an exterior surface extending along a longitudinal stent axis; and

a stent cover on said interior surface, exterior surface or both, which is formed of a porous polytetrafluoroethylene;

wherein said porous polytetrafluoroethylene comprises a ~~non-stretched~~ porous structure having voids intermeshed between pockets of PTFE without a node and fibril structure.

Claim 14 (original): An endoprosthesis device according to claim 13 wherein said polytetrafluoroethylene lacks node and fibril structure.

Claim 15 (original): The endoprosthesis device of claim 13 wherein said stent cover is on said exterior surface and said interior surface of said stent.

Claim 16 (original): The endoprosthesis device of claim 13 wherein said stent cover is expandable upon expansion of said stent.

Claim 17 (new): The endoprosthesis device of claim 1 wherein said siloxane is polydimethylsiloxane.

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Claim 18 (new): The method of claim 7 wherein said siloxane is polydimethylsiloxane.